



National
Transportation
Safety Board

Investigative Hearing

Landing Accident
Asiana 214, B777
San Francisco
July 6, 2013



Initial Information

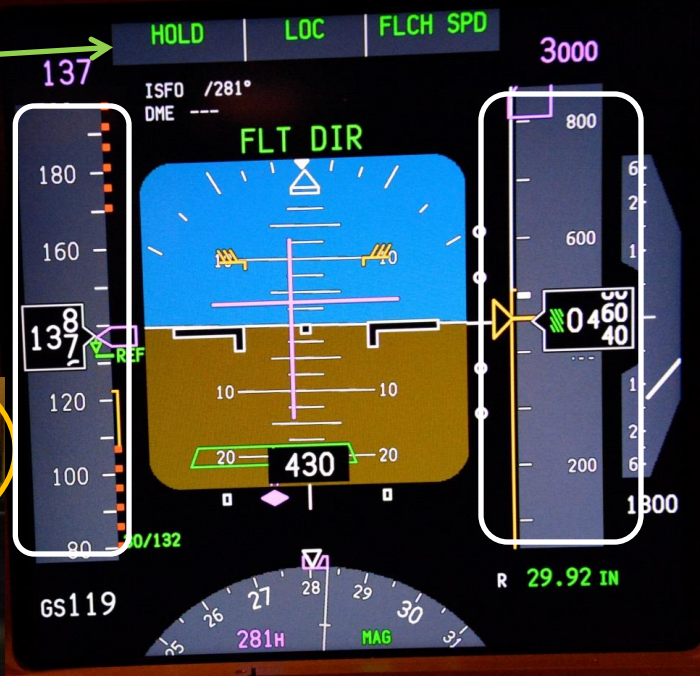
- Departure and en route routine
- 10.5 hours duration
- SFO area about 1115 local
- Clear weather, light wind
- Visual approach
- Glideslope out of service

Pilot roles and experience

- Pilot flying – left seat
 - Transitioning from A320
 - 9,700 total time, < 45 hours B777
 - First trip to SFO in B777
 - Last SFO flight in 2004, in B747
- Pilot monitoring – right seat
 - New instructor on B777
 - 12,000 total time, B777 3,200, recent SFO
- Relief pilot in jumpseat

Flight Mode Annunciation

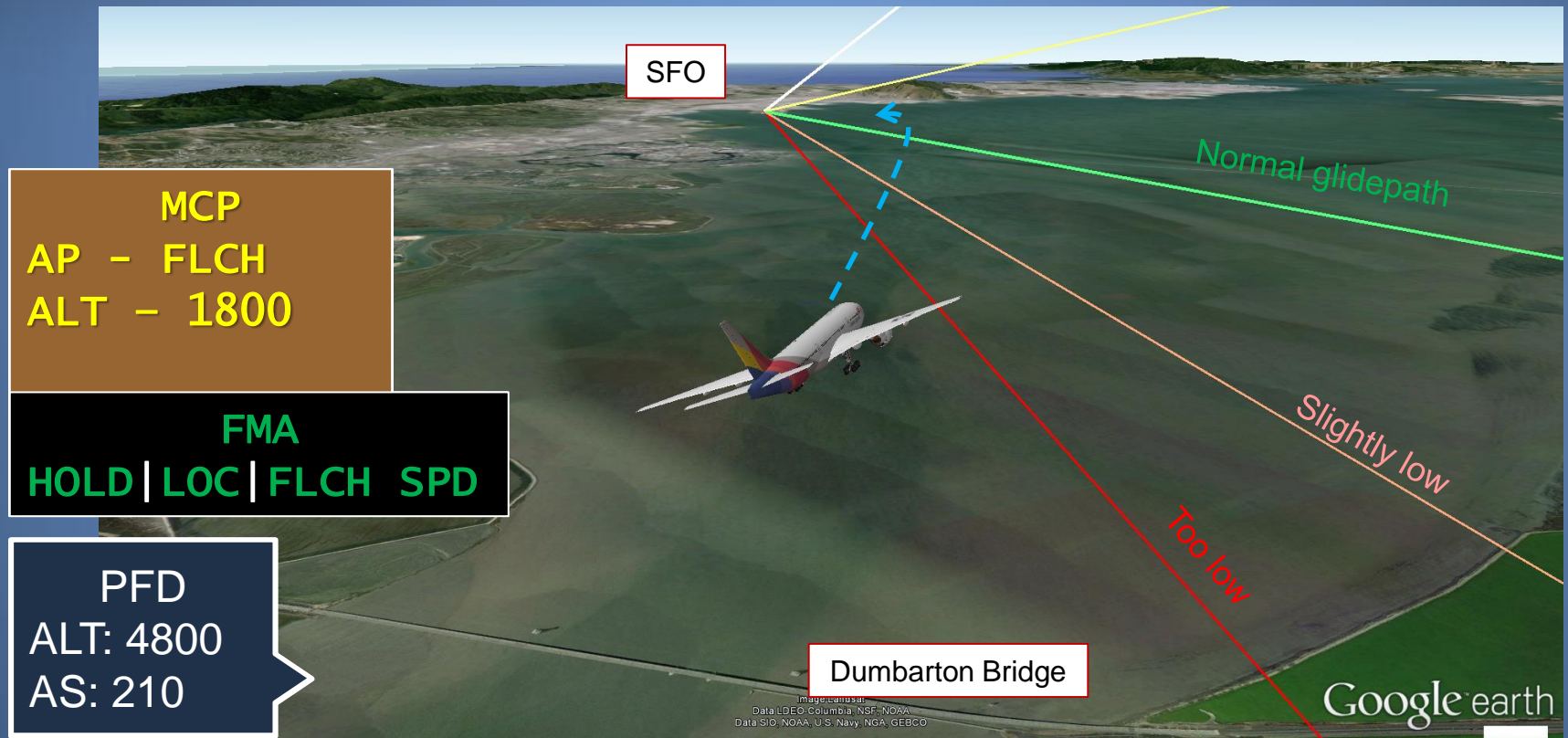
Mode Control Panel



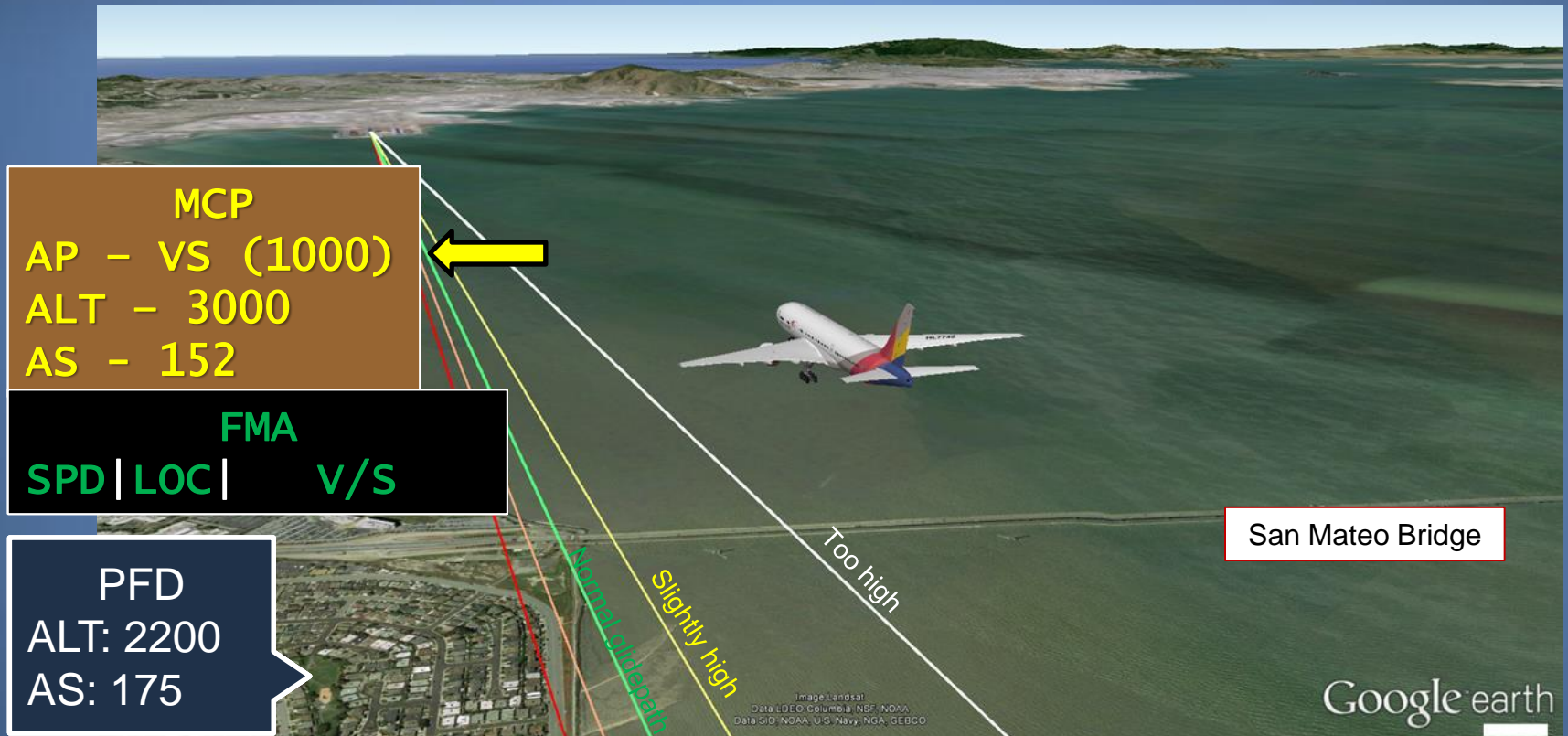
Primary Flight Display

Photos are for orientation purposes only and do not reflect the exact status of the accident airplane.

Sequence of Events



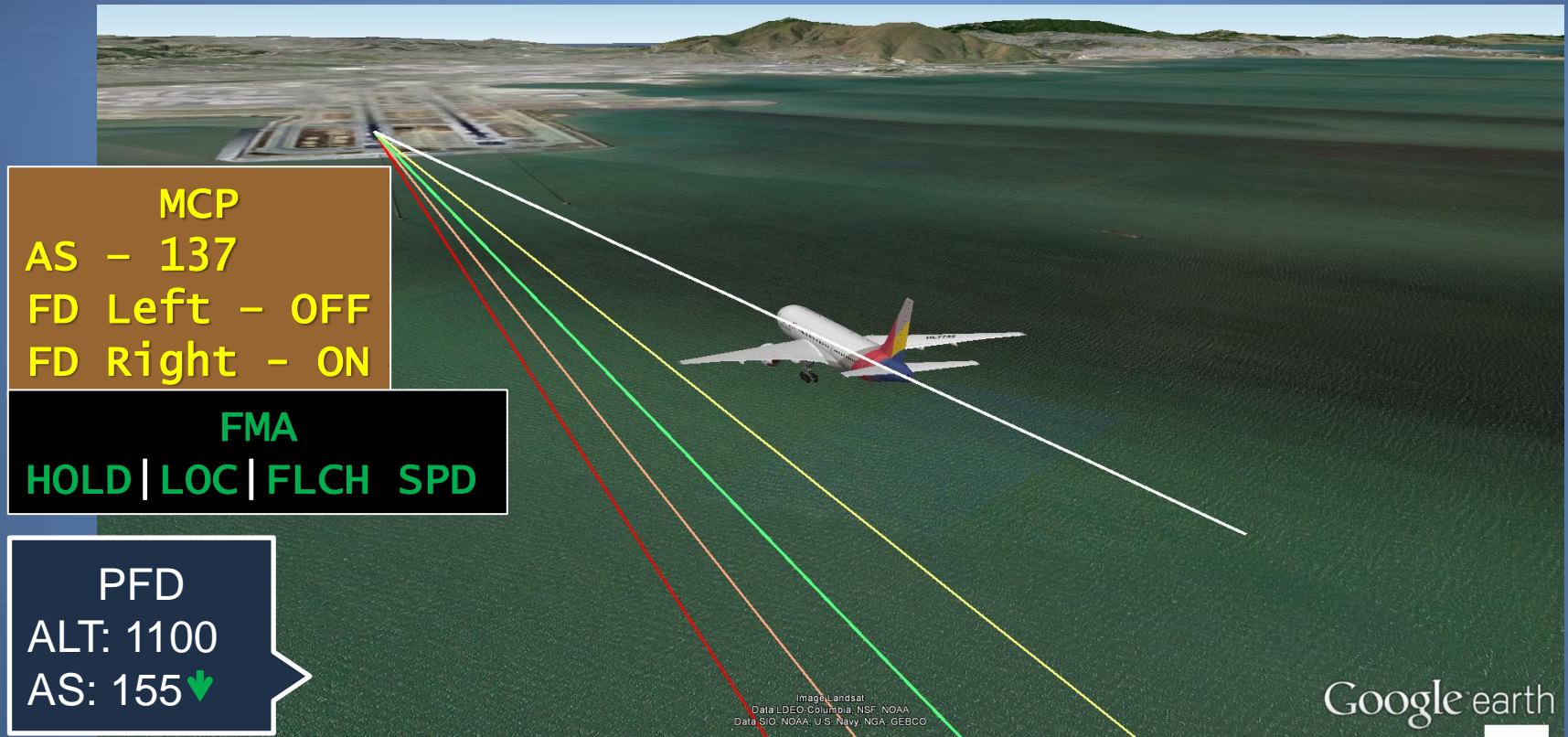
Sequence of Events



Sequence of Events



Sequence of Events



Sequence of Events

PAPI graphic is not to scale, for demonstration purposes only.



FMA
HOLD | LOC | FLCH SPD

PFD
ALT: 500
AS: 137 ▼

Image Landsat
Data LDEO, Columbia, NSF, NOAA
Data SIO, NOAA, U.S. Navy, MSA, GEBCO

Google earth

Sequence of Events

PAPI graphic is not to scale, for demonstration purposes only.



FMA
HOLD | LOC | FLCH SPD

PFD
ALT: 350
AS: 130

Image Landsat
Data LDEO-Columbia, NSF, NOAA
Data SIO, NOAA, U.S. Navy, NGA, GEBCO

Google earth

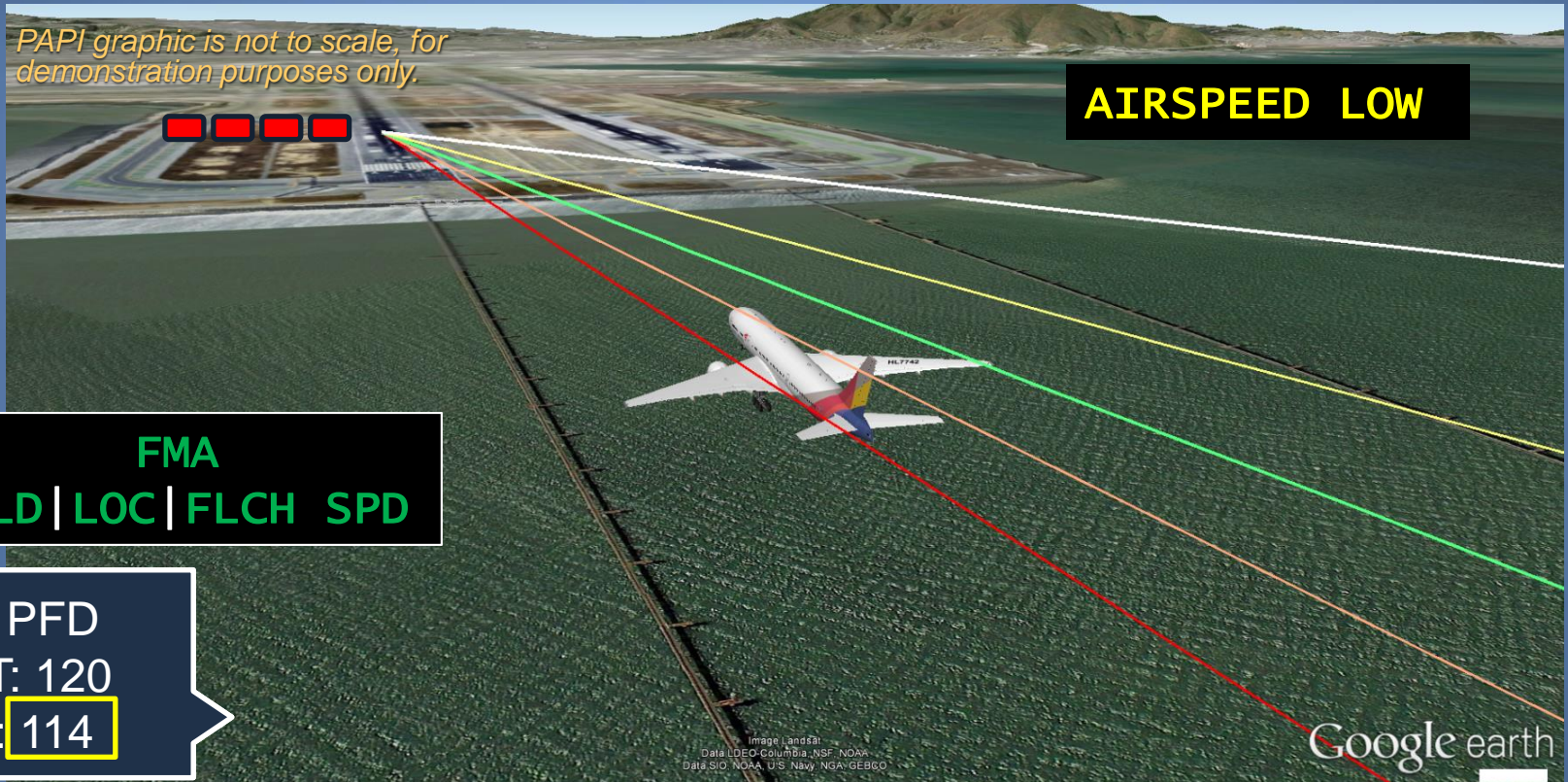
Sequence of Events

PAPI graphic is not to scale, for demonstration purposes only.

AIRSPEED LOW

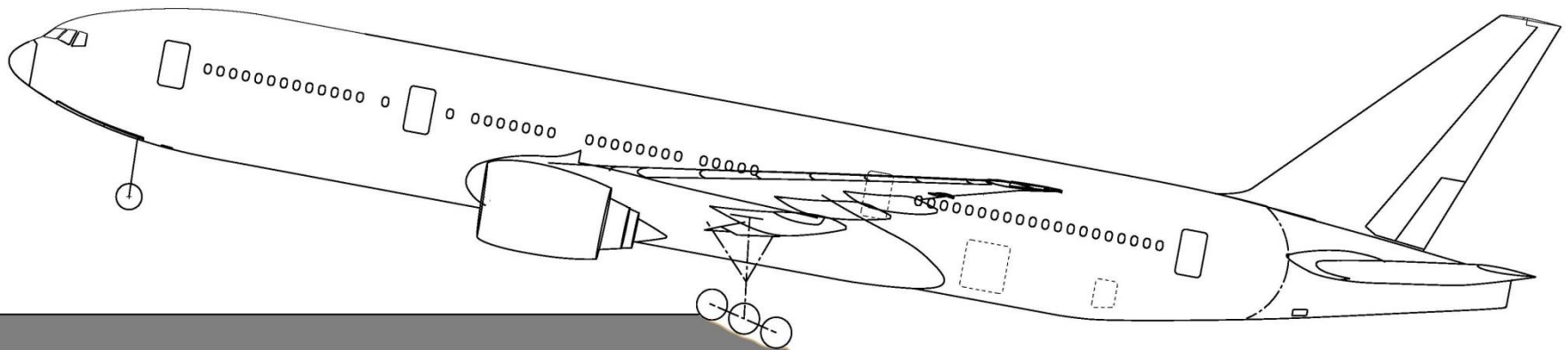
FMA
HOLD | LOC | FLCH SPD

PFD
ALT: 120
AS: 114



NTSB

Sequence of Events



Surveillance video



Surveillance video



NTSB

Emergency Response and Cabin Safety



Hearing Agenda – Part 1

- Panel 1 – B777 flight deck concepts
 - Explain automation
 - Connect to accident data
- Panel 2 – Pilot training
 - Automation
 - Visual approaches
 - Oversight
- Panel 3 – Effects of Automation
 - Pilot workload and awareness
 - Implications for training and design

Hearing Agenda – Part 2

Post-impact issues

- Panel 4 – Emergency Response
 - Training and tactics
 - Use of equipment
- Panel 5 – Cabin Safety
 - Seats and restraints
 - Interior materials
 - Evacuation system



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